ABSTRACT

PULSE WIDTH MODULATED POWER SUPPLY

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A pulse width modulated (PWM) power supply has a plurality of phases. Each phase comprises a power switching device for generating an output signal. A controller receives a modulating input signal and generates a set of control signals, each control signal controlling the operation of the switching device in a respective one of the phases. Each control signal comprises a sequence of time windows, with a pulse of variable width positioned within each time window. Control signals for some of the phases are aligned to different parts of their respective time windows compared to the control signals for other phases. This has been found to improve linearity when operating at extremes of normal operating range.